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October 6, 2015

- Large Drop in Municipal Volume
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Large Drop in Municipal Volume

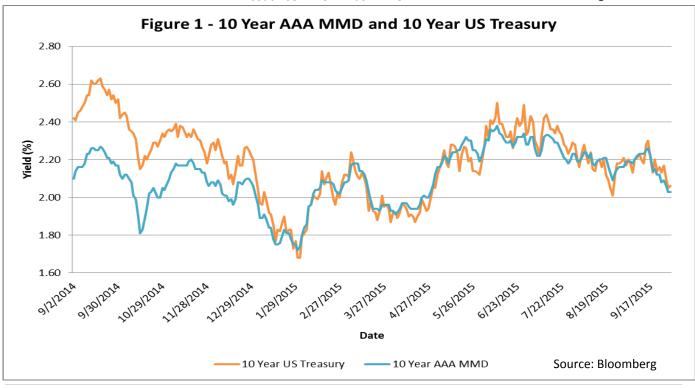
In September, municipal volume dropped significantly for the first time in several months. According to Thomson Reuter's data, long-term municipal bond issuance declined by 27.3% to \$18.32 billion in 737 issues, a fall from \$25.21 billion in 812 issues in

September of 2014. Refundings have contributed largely to municipal volume in the first half of 2015, but have tapered off in the year's 3rd quarter. Investors have noted that this month's FOMC meeting and global market volatility, along with other September events, have also served as contributing factors to this month's slowdown in issuance. Overall, however, the drop in volume is attributed to the decrease in refundings, which were down 31.6% in September from the year before. New money issuance fell as well in

September, down 16.1% from the year before.

The Municipal Market Data ("MMD") 'AAA' Muni Market 10 year yield ended September at 2.03%, a 13 bp decline from 2.16% at the end of August. The 30 year yield decreased 6 bps, ending September at 3.04%.

The 10-year US Treasury yield ended September at 2.06%, down 15 bps from 2.21% at the end of the prior month. The 30-year Treasury yield also decreased, ending September at 2.87%, down from 2.95% at the end of August. As of



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September 30th, the ratios of 'AAA' General Obligation municipal yields to Treasury yields were:

Year	Yield	% Yield		
1-Year	0.23 / 0.33	69.70%		
5-Year	1.27 / 1.37	92.70%		
10-Year	2.03 / 2.06	98.54%		
30-Year	3.04 / 2.87	105.92%		

Sources: The Bond Buyer, Bloomberg, US Department of Treasury, US Federal Reserve

Variable Rate Market Update

The SIFMA Municipal Swap Index, an average of high-grade, tax-exempt, variable rate bonds, once again ended the month at .02%, remaining stable since the end of July. The 30-day LIBOR decreased slightly in September, ending the month at .19300%, down from .19855% at the end of August. Again this month, demand remains very strong for both tax-exempt and taxable variable-rate products. Please refer to Figure 2 below for historical SIFMA and LIBOR

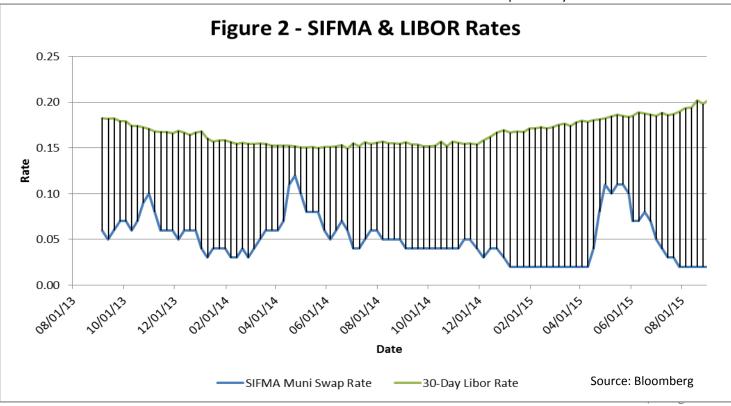
rates.

2015 At the Three Quarter Mark

A quick synopsis of what has happened with issuance, rates, and credit for the first 9 months of 2015.

#1 Bond Issuance Remains Up

With the exception of September, bond issuance was up dramatically for the first three quarters of 2015. Issuers looking to lock in low rates before what was, until they declined to act, a strong possibility of a Federal Reserve







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rate increase, refinanced and borrowed new money at nearly a 44% higher rate in 2015 than 2014. So far this year municipal borrowers have issued \$308 billion of bonds versus \$233 billion for the same period a year ago. Borrowing has been primarily rate driven, evidenced by the par value of new money only deals being up only 3.9% from 2014 while refunding only issues were up 61%. There was strong evidence that municipalities were using their refunding opportunities make selective capital investments combined as refunding/new money issues were up 47%.

Among the various sectors, the most prolific borrowers were electric utilities and education with incremental issuances of 96% and 65%, respectively. Hospitals, despite concerns about the unsettled insurance market, also issued at a 57% higher rate than the year Giving credence to before. those concerned that cities and states are not fully taking advantage of the low rate environment to invest in the infrastructure, nation's transportation borrowing was down 10.5%. This set a pace for just under \$44 billion

transportation linked financing, which would be the worst year since 2011 and the second worst since 2007 for the sector.

#2 Rates Lower Than 2014, but Unsettled

In general, interest rates thus far in 2015 are lower than in but have become 2014, somewhat more volatile as uncertainty surrounding world economic events in China and the European Union have put conflicting pressures on U.S. financial markets. Since the beginning of 2014, The Bond Buyer 20, a municipal bond interest rate index of high 20-year bonds quality maintained by Thomson-Reuters, reached its low point of the period in mid-January 2015. Since then, the index has remained below any level recorded in the first 11 months of 2014. These low rates help explain the large number of refundings as many bonds that could not be refunded in 2014 because of the relatively higher rates are now viable due to 2015's lower rates.

In addition to increasing rates from January to September credit spreads, the difference in yield between the highest quality bonds and those with lower ratings, has increased. This suggests that investors are becoming more cautious in their assessment and are demanding a higher return. The spread between 30 year Aaa rated general obligation bonds and those rated Baa increased by 8 basis points from January 1st through the end of the 3rd quarter this year.

#3 Puerto Rico

Puerto Rico has supplanted Detroit as the bankruptcy in waiting of 2015 with the not so small catch that current law doesn't allow for the Commonwealth to file for a Chapter 9 reorganization, although that may be changing. While it waits for some possible action in Washington, Puerto Rico has made clear that its current debt load is simply unsustainable and will need to be adjusted down. The island's creditors have, for the most part, reluctantly agreed and tentative discussions are taking place although any possible workout is a long way away, both chronologically and Adding the legally. to uncertainty surrounding Puerto Rico's future is the thawing of relations between Cuba and the U.S. which all but promises to add a new competitor for the

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Commonwealth in both investment and tourist dollars.

Source: The Bond Buyer, Thomson-Reuters, St. Louis Federal Reserve Bank





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			September 2015 Sele	cted Bond Issue	es			
General Ob	oligation and	d Essential Service Revenu	ıe					
Sale Date	Par (\$ mil)	Issuer	Project	Ratings	<u>Final</u> Maturity	Yield	Spread to MMD	Notes
9/7/2015	\$6.80	City of Butler, PA	General Obligation Bonds, Series B	/AA/	12/1/2040	4.050%	101	Bank Qualified, Insured - AGM
9/14/2015	\$12.80	City of Lebanon, OR	General Obligation Refunding Bonds	A1//	6/1/2027	2.890%	45	
9/2/2015	\$9.21	Hancock County, TN	General Obligation Refunding Bonds	/AA/	6/1/2037	3.630%	66	Bank Qualified, Insured - MAC
Education S	ector							
Sale Date	Par (\$ mil)	<u>Issuer</u>	<u>Project</u>	Ratings	<u>Final</u> <u>Maturity</u>	<u>Yield</u>	Spread to MMD	<u>Notes</u>
9/21/2015	\$107.62	University of Washington	Washington Biomedical Research Propoerties Series 2015A	Aa1/AA+/	1/1/2048	4.112%	98	
9/14/2015	\$62.24	Virginia State Polytech Institute and State University	University Dormitory and Dining Hall System and General Revenue Pledge Bonds	Aa1/AA/	6/1/2035	3.660%	70	
9/7/2015	\$213.71	University of Oklahoma	General Revenue Bonds Series 2015C	A+/ /AA-	7/1/2045	4.140%	103	
Water/Utili	•							
Sale Date	Par <u>(\$ mil)</u>	<u>Issuer</u>	Project	Ratings	<u>Final</u> <u>Maturity</u>	<u>Yield</u>	Spread to MMD	<u>Notes</u>
9/21/2015	\$9.66	Poweshiek, IA Water Association	Water Revenue Refunding Bonds	/A+/	6/1/2038	3.868%	86	Bank Qualified
9/14/2015	\$9.43	New Castle, PA Sanitation Authority	Sewer Revenue Bonds	/AA/	6/1/2027	3.100%	66	Bank Qualified, Insured - BAM
9/14/2015	\$4.80	Pigeon Creek, PA Sanitation Authority	Sewer Revenue Bonds	/AA/	7/1/2040	4.030%	90	Bank Qualified, Insured - AGM
9/7/2015	\$52.29	Emerald Coast, FL Utilities Authority	Utility System Refunding Revenue Bonds	/AA/	1/1/2036	4.000%	112	Insured - BAM
9/3/2015	\$25.06	Sienna Plantation Municipal Utility District No. 12	Unlimited Tax Bonds	A3/AA/	9/1/2039	4.000%	97	Insured - BAM
Healthcare	Sector							
Sale Date	Par <u>(\$ mil)</u>	<u>Issuer</u>	<u>Project</u>	Ratings	<u>Final</u> <u>Maturity</u>	<u>Yield</u>	Spread to MMD	<u>Notes</u>
9/21/2015	\$46.78	County of Lucas, OH	Hospital Revenue Bonds	Aa3/AA/	11/15/2045	4.146%	102	
9/28/2015	\$54.00	King County Public Hospital District No. 2	Evergreen Health Limited Tax General Obligation Bonds Series B	A3//A-	12/1/2037	4.080%	117	

Source: Bloomberg

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